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January 7, 1987 NRC/TMI 87-003

Docket No. 50-320

Mr. F. R. Standerfer Vice President/Director, TMI-2 GPU Nuclear Corporation P. O. Box 480 Middletown, PA 17057

Dear Mr. Standerfer:

Subject: Reduced Defueling Canister Void Volume

Reference: (a) Letter 4410-86-L-0193, F. Standerfer to W. Travers,

Canister Dewatering, dated November 10, 1936 (b) Letter 4410-86-L-0220, F. Standerfer to W. Travers, Canister Dewatering, dated December 30, 1986

References (a) and (b) requested NRC approval of a reduction in the required void volumes of the defueling canisters prepared for shipment in the NUPAC 125-B shipping cask. The issues were further discussed in meetings between our technical staffs during the weeks of November 17 and December 15, 1986.

We have completed our review of your proposal and based on the attached safety evaluation have concluded that the void volumes in the defueling canisters can be safely reduced to a level that assures exposure of a minimum of 25 grams of recombiner catalyst in any possible canister orientation. This is equivalent to a volume of 25 percent of the empty canister void for a fuel canister, and a slightly larger percentage of the empty volume for a filter or knockout canister. We have further concluded that the void volumes can be reduced and still be in conformance with the Certificate of Compliance for the NUPAC 125-8 cask, thus no further licensing action is required as a result of this issue.

We have, however, determined that confirmatory measurements of canister gas contents after shipping are desirable to further support the data already gathered on canister gas generation. This was discussed in a meeting among GPU Nuclear, NRC, and EG&G Idaho staffs on January 7, 1987.

We therefore approve your request to reduce the required canister void volume to 25 percent in the fuel canisters and to levels assuring exposure of 25 grams of catalyst in filter and knockout canisturs provided the following conditions are met:

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- Canisters will be dewatered to the maximum extent practical under the current dewatering program.
- After shipping, confirmatory gas measurements will be taken on one canister per shipment (i.e., one of seven for a single cask shipment, one of fourteen for a double cask shipment). A gas sample will be withdrawn and analyzed shortly after (within a few days) removal of the canister from the shipping cask at the Idaho National Engineering Laboratory. The canister will be stored in an unvented condition for about six weeks and resampled. The gas sample analysis is to be recorded and used to confirm the conservatism in the projected allowable shipping window determined by the samples withdrawn prior to shipping.
- The sample results are to be made available for NRC review on request.

This approval is contingent upon NRC approval of the associated procedures subject to Technical Specification 6.8.2.

Sincerely,

ORIGINAL SIGNED BY.

William D. Travers Director TMI-2 Cleanup Project Directorate

Attachment: As stated

cc: T. F. Demmitt

R. E. Rogan

S. Levin

J. E. Frew

J. J. Byrne

A. W. Miller

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